
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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COBALT IN AUGUST 1996

U.S. consumption of cobalt during January through August 1996 was basically the same as consumption during the first 8 months of 1995, according to the U.S. Geological Survey (USGS). U.S. imports of cobalt metal and cobalt contained in chemicals during January through July 1996 were 8% higher than imports during the first 7 months of 1995. Exports of unwrought cobalt and cobalt contained in chemicals were 56% higher in January through July 1996 than during the same period in 1995. Trade data for August will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated using unrounded data.

Update

The Defense Logistics Agency (DLA) has announced its cobalt sales program for the fiscal year that began October 1, 1996. The DLA plans to offer cobalt in six sales, three of which will be on a sealed bid basis and three on a negotiated bid basis. The sealed bid offers are scheduled for December 1996, March 1997, and May 1997. The negotiated bid offers are scheduled

for February, April, and September 1997. Approximately 450 tons (1 million pounds) of cobalt will be offered at each sale, with the exception of the February sale, at which 500 tons (1.1 million pounds) will be offered. Bids for the first sealed bid sale are due December 2. An invitation for bids for this sale can be obtained from DLA's contracting officer, Rozelyn Durant, at (703) 767-5518.

Price update, dollars per pound of electrolytic cobalt (Source—Platt's Metals Week):

<u>Week ending</u>	<u>Price range</u>
Sept. 27	22.20-23.20
Oct. 4	22.30-23.30
Oct. 11	21.50-22.50
Oct. 18	21.50-22.50
Oct. 25	20.50-21.50

Monthly averages

<u>July</u>	<u>August</u>	<u>September</u>
22.27	21.49	22.85

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
1995:				
August	278	144	129	550
September	264	144	127	534
October	279	144	127	550
November	282	119	133	533
December	250	137	130	517
January-August r/	2,130	1,140	1,020	4,290
January-December 4/	3,200	1,690	1,540	6,430
Year 5/	3,660	1,800	1,540	7,000
1996:				
January	291	145	132	569
February	265	148	124	537
March	279	129	133	541
April	268	129	125	522
May	295	136 r/	128	560 r/
June	259 r/	135 r/	136	530 r/
July r/	262	151	129	542
August	289	135	132	555
January-August	2,210	1,110	1,040	4,360

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

5/ Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End Use	1995			1996	
	January- August	January- December 2/	Year 3/	August	January- August
Steel:					
Stainless and heat resisting	25 r/	38	38	3	26
Tool	W	W	146	W	W
Superalloys	1,770 r/	2,650	2,940	248	1,860
Alloys (excludes steels and superalloys):					
Magnetic alloys	462 r/	698	757	54	451
Welding materials (structural and hard-facing) 4/	178	264	287	22	182
Other alloys 5/	40 r/	59	80	4	37
Cemented carbides 6/	500 r/	746	748	60	501
Chemical and ceramic uses:					
Catalysts	475 r/	713	732	53	445
Driers in paints or related usage	539 r/	770	770	52	471
Ground coat frit	110	172	172	22	146
Pigments	W	W	172	W	W
Miscellaneous and unspecified 7/	197 r/	311	163	35	235
Total	4,290 r/	6,430	7,000	555	4,360

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ Includes annual reports.

4/ Includes wear-resistant alloys.

5/ Includes nonferrous alloys.

6/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

7/ Includes feed or nutritive additive, full-alloy steel, glass decolorizer, mill products made from metal powder, and data indicated by the symbol "W."

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

	Industry 2/				U. S. Government 3/
	Metal 4/	Oxide and other chemical compounds 5/	Scrap	Total	Metal
1995:					
August	227	316	101	645	21,600
September	257	295	96	648	21,200
October	269	292	101	662	21,000
November	249	317	103	669	20,800
December 6/	323	283	103	709	20,700
Yearend 7/	390	309	103	802 r/	20,700
1996:					
January	309	320 r/	135	764 r/	20,700
February	275	300 r/	150	725 r/	20,700
March	274	706 r/	152	1,130 r/	20,400
April	277	699 r/	138	1,110 r/	20,100
May	258	694 r/	138	1,090 r/	19,800
June	232 r/	695 r/	99	1,030 r/	19,600
July	251 r/	695 r/	99 r/	1,040 r/	19,500
August	363 8/	416 8/	96	875	19,300

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Data from Defense Logistics Agency, National Defense Stockpile Center. Includes material committed for sale pending shipment.

4/ Includes metal powder.

5/ Data may include other cobalt materials.

6/ Data based on monthly reports.

7/ Includes annual reports.

8/ Data being questioned.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1995:								
July	427,000	\$26,500,000	58,300	\$2,720,000	85,600	\$1,140,000	492,000	3,880,000
August	615,000	36,900,000	73,800	2,870,000	201,000	2,730,000	723,000	4,610,000
September	399,000	24,400,000	65,200	3,070,000	163,000	2,330,000	493,000	5,100,000
October	531,000	31,700,000	29,700	1,310,000	110,000	1,420,000	583,000	5,680,000
November	259,000	16,200,000	58,900	2,780,000	98,800	1,350,000	328,000	6,010,000
December	411,000	25,900,000	16,300	722,000	16,000	189,000	427,000	6,440,000
January-December	5,530,000	325,000,000	808,000	34,300,000	1,170,000	15,800,000	6,440,000	XX
1996:								
January	515,000 7/	30,000,000	53,000 8/	2,060,000 8/	276,000 8/	3,480,000 8/	627,000	627,000
February	470,000	29,900,000	57,100	2,810,000	25,600 8/	314,000 8/	519,000	1,150,000
March	540,000 7/	36,000,000 7/	49,800 8/	2,450,000 8/	183,000 8/	2,300,000 8/	626,000 r/	1,770,000
April	432,000	27,500,000	147,000	6,370,000	104,000	1,340,000	566,000	2,340,000
May	457,000	27,500,000	62,100	2,730,000	55,200	786,000	515,000	2,850,000
June	606,000 8/	36,000,000 8/	82,200	3,710,000	88,800	1,170,000	689,000	3,540,000
July:								
Australia	--	--	1,450	63,900	--	--	1,040	5,020
Belgium	35,900	2,710,000	44,600	2,250,000	--	--	68,000	189,000
Brazil	--	--	--	--	--	--	--	10,800
Canada	55,500	3,500,000	--	--	3,140	78,600	57,000	573,000
China	--	--	--	--	--	--	--	1,250
Finland	32,300	1,990,000	40,500	1,770,000	57,100	699,000	76,600	835,000
France	3,180	336,000	2,230	202,000	--	--	4,790	23,500
Germany	3,550	278,000	--	--	--	--	3,550	63,600
Hong Kong	--	--	--	--	--	--	--	500
Japan	--	--	50	4,200	--	--	36	22,300
Netherlands	--	--	--	--	--	--	--	5,270
Norway	189,000	10,900,000	--	--	--	--	189,000	1,020,000
Russia	19,500	974,000	--	--	--	--	19,500	397,000
South Africa	500	24,700	--	--	--	--	500	11,500
Spain	--	--	5,030	151,000	--	--	3,620	15,900
Sweden	--	--	--	--	--	--	--	708
Switzerland	--	--	--	--	--	--	--	960
United Kingdom	2,800	168,000	--	--	--	--	2,800	47,700
Zaire	32,100	1,680,000	--	--	--	--	32,100	292,000
Zambia	197,000	10,400,000	--	--	--	--	197,000	681,000
Total	571,000	33,000,000	93,900	4,440,000	60,200	778,000	655,000	4,200,000

r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt sulfates, cobalt chlorides, cobalt carbonates, and cobalt acetates.

4/ Customs value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ Data revised by the Bureau of the Census.

8/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1995:						
July	8,340	\$408,000	106,000	\$1,390,000	22,700	\$1,410,000
August	5,680	326,000	160,000	2,290,000	5,670	634,000
September	8,380	242,000	60,200	1,080,000	7,710	516,000
October	10,400	684,000	78,100	1,050,000	15,400	813,000
November	4,020	268,000	33,500	444,000	11,800	901,000
December	6,440	566,000	33,400	631,000	21,200	1,360,000
January-December	98,200	5,330,000	880,000	12,400,000	155,000	9,760,000
1996:						
January	5,110 4/	414,000 4/	30,600 4/	452,000 4/	10,400 4/	563,000 4/
February	6,560	490,000	90,900 5/	833,000 5/	16,000	651,000
March	1,340	107,000	71,200 4/	1,370,000 4/	21,800	1,410,000
April	3,940	213,000	48,700 4/	954,000 4/	19,000 4/	1,270,000 4/
May	3,940	326,000	52,800 5/	1,880,000 5/	19,800	1,270,000
June	2,630	108,000	10,900 5/	396,000 5/	13,800	1,070,000
July:						
Belgium	500	32,700	18,900 5/	1,760,000 5/	--	--
Canada	1,750	63,200	25,900	329,000	349	61,600
France	--	--	3,150	76,800	1,370	84,500
Germany	1,490	195,000	14,400 5/	287,000 5/	680	36,600
India	--	--	750 5/	44,700 5/	--	--
Japan	--	--	--	--	4,530	309,000
Sweden	442	24,200	1,420	52,000	--	--
United Kingdom	193	21,500	7,800 5/	272,000 5/	4,580	332,000
Total	4,380	337,000	72,300	2,820,000	11,500	824,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ Data revised by the Bureau of the Census.

5/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1995:								
July	55,700	\$2,570,000	19,900	\$870,000	31,800	\$523,000	77,700	727,000
August	72,500	4,900,000	11,600	517,000	32,900	447,000	88,800	815,000
September	151,000	8,590,000	28,900	1,020,000	60,500	931,000	186,000	1,000,000
October	92,900	6,090,000	28,200	511,000	12,400	217,000	116,000	1,120,000
November	72,300	3,260,000	11,200	248,000	25,700	416,000	86,600	1,200,000
December	71,400	4,690,000	18,600	724,000	43,200	772,000	95,300	1,300,000
January-December	898,000	49,000,000	271,000	8,850,000	860,000	7,080,000	1,300,000	XX
1996:								
January	70,200	5,050,000	31,300	889,000	34,500	788,000	101,000	101,000
February	76,700	4,750,000	20,200	642,000	42,000	510,000	101,000	202,000
March	214,000	13,000,000	29,100	1,070,000	336,000	318,000	316,000	518,000
April	168,000	9,640,000	24,300 7/	497,000 7/	15,100 8/	132,000 8/	189,000 r/	707,000
May	145,000	6,930,000	22,700 7/	689,000 7/	20,500	346,000	166,000	873,000
June	159,000	7,500,000	13,300 7/	514,000 7/	20,600	310,000	173,000	1,050,000
July	61,500	2,760,000	30,100 7/	377,000 7/	21,200 7/	279,000 7/	88,300	1,130,000

r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

8/ Data revised by the Bureau of the Census.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
1995:				
July	27,600	\$1,080,000	--	--
August	75,400	2,060,000	--	--
September	95,900	2,060,000	21,200	\$32,700
October	41,400	1,220,000	20,000	59,000
November	40,500	1,930,000	50,800	565,000
December	9,070	682,000	1,710	2,700
January-December	485,000	17,800,000	139,000	1,610,000
1996:				
January	38,800	1,640,000	8,050 3/	105,000 3/
February	18,300	1,630,000	5,560 3/	337,000 3/
March	24,100	2,060,000	10,900 3/	130,000 3/
April	25,400	1,890,000	21,700 3/	1,020,000 3/
May	18,800	1,460,000	19,300	174,000
June	62,000	2,150,000	--	--
July	28,500	1,170,000	13,400 3/	496,000 3/

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.